2

ALTERNATIVE ACTIONS CONSIDERED

This chapter describes the alternatives considered for the proposed rail line at Seadrift.

2.1 NO-BUILD ALTERNATIVE

In its environmental review, SEA considered a "no-build" alternative. Under this alternative, current operations would continue over the existing UP rail line. As a result the UCC would not obtain the operational flexibility of having access to two rail carriers. However, if the proposed rail line is not built, the environmental impacts associated with the build alternatives would not occur. There would be no need for additional right-of-way and therefore would not impact any wetlands, watercourses or local properties. There would be no change in local surface drainage. In addition, no new grade crossings would be required and as such no effect to vehicles on local public and private roadways.

2.2 BUILD ALTERNATIVES

SEA considered three alternative alignments for the proposed rail line—the Direct Alignment, the Pipeline/FM 185 Alignment, and the Property Alignment (see Figure 2-1), which are described below. The closest location from which BNSF could access the Seadrift facility is from the Port Lavaca Branch between Placedo and Port Lavaca, over which it is to obtain trackage rights. The alignments could connect from either the north or the south end of the existing UCC North Yard. A rail line in this location would meet the conditions of the UP/SP merger and would avoid the potential for trains to block the main plant entrance.

Each of the alternatives were developed and evaluated in accordance with the design criteria set forth in the following sources:

- **1996 AREMA Manual for Railway Engineering**
- **BNSF Design Guidelines for Industrial Track Projects, dated March 1, 1997**
- **BNSF Standard Plans Book, dated January 8, 1998**
- **BNSF Standard Specifications, dated September 17, 1997**
- **BNSF Specifications for Pre-cast Concrete Box Culverts, dated May 1994**

The proposed rail line would consist of a single track composed of continuous welded rail on concrete ties placed on 12 inches of ballast. The typical width of the ROW is 90 feet – to accommodate a standard BNSF trackbed, adjacent access road, and drainage ditch (see Figure 2-2). The property adjacent to the proposed alignments is predominantly row crop and pasture lands. Right-of-way fencing would be included as agreed on with the adjoining landowners.

The rail line would be constructed with 6-degree curves and a maximum civil engineering design train speed of 25 mph. The rail line would be constructed to accommodate modern 286,000-ton rail cars, and a typical train would consist of 25 to 30 cars.

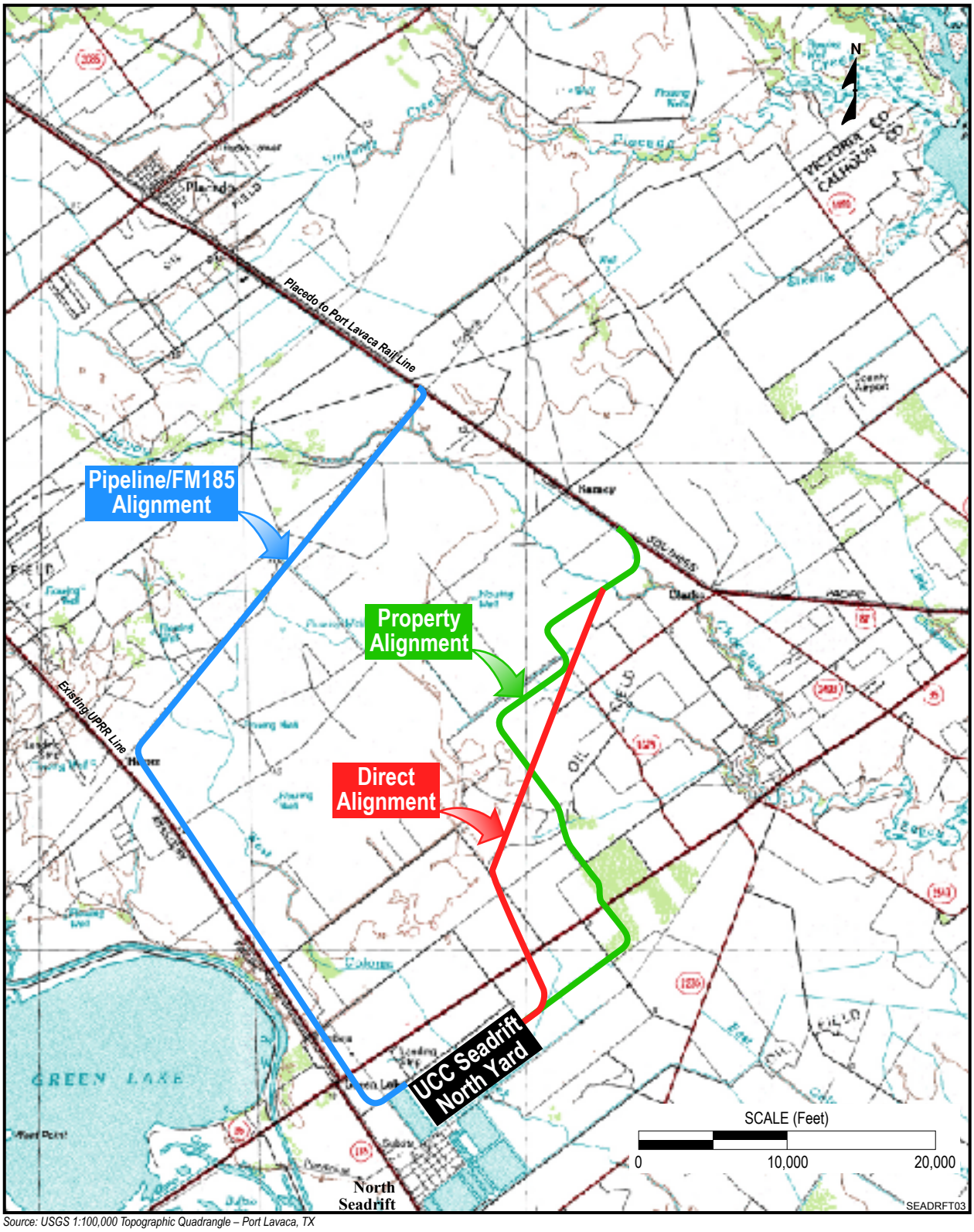
Train movements over the proposed rail line between UCC and the connection with the Port Lavaca Branch at Kamey would be under the jurisdiction of the Restricted Speed operating rule, which limits train speed to 20 mph and requires slower speeds under certain conditions. At Kamey, BNSF train crews would consult with the UP train dispatcher for access to the Port Lavaca Branch. BNSF trains would continue to operate under Restricted Speed operating rules on the Port Lavaca Branch between Kamey and Placedo.

2.2.1 Alternatives Considered But Dismissed

BNSF identified three alternative locations for the proposed rail line, but two of these alternatives were eliminated from further consideration, as discussed below. The alternatives are referred to as the Direct Alignment Alternative and the Pipeline/FM 185 Alignment.

The Direct Alignment Alternative was a 6.2-mile route that generally takes a direct path from the connection with the UP Port Lavaca Branch near Kamey to the UCC North Yard. This alternative would use some of the lands already owned by UCC but would cut across numerous private property lines in a more southerly direction than the Property Alignment alternative (see Figure 2-1). This alternative would divide much more private farmland and ranch land and would not allow for as much expansion of the existing UCC North Yard as the Property Alignment alternative. In addition, although this alternative is shorter and would have a lower anticipated cost of construction than either of the other alternatives, it would affect 10 times the number of acres of wetlands as the proposed alignment. Because of its impacts to area wetlands, this alignment was rejected.

The Pipeline/FM 185 Alignment Alternative was an 11.4-mile alignment, developed as an alternative to access the southern side of the existing UCC facility (see Figure 2-1). Connecting on its northern end to the existing UP Placedo–Port Lavaca rail line (the Port Lavaca Branch) midway between Placedo and Kamey, this alternative would follow the ROW of an existing underground pipeline in a generally southwesterly direction to Heyser, where it would turn generally southeasterly to parallel the existing UP line, connecting with the south end of the existing UCC North Yard near Green Lake. This alternative would not improve the operational



Source: USGS 1:100,000 Topographic Quadrangle – Port Lavaca, TX

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ALTERNATIVE ALIGNMENTS

Figure 2-1

flexibility of the North Yard, nor would it accommodate its expansion to the extent provided by the Property Alignment alternative. This alternative would use few existing easements and would require the acquisition of additional ROW, thereby affecting local landowners, and would divide more farmland and ranch land than the Direct Alignment or Property Alignment alternatives. Because of this significantly larger commitment and acquisition of private property, and associated disruption to farming operations, this alternative alignment was rejected.

2.2.2 Proposed Action - Environmentally Preferable Route

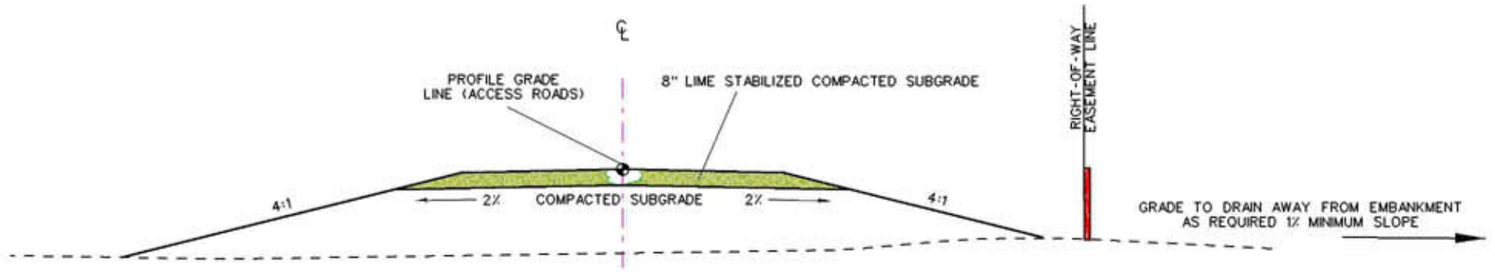
The proposed rail line, or Property Alignment Alternative, is a 7.8-mile alignment taking maximum advantage of existing UCC easements and property (see Figure 2-1). Connecting on its northern end to the existing UP Placedo-Port Lavaca rail line (the Port Lavaca Branch) south of Kamey, this alternative would follow existing property lines in a generally southerly direction, connecting with the north end of the existing UCC North Yard in such a way as to allow for full expansion and operational flexibility of the yard in the future.

Table 2-1 describes the detailed design elements of the proposed Property Alignment alternative. The alignment is described from north to south, starting with its connection at Kamey (Station 00 + 00) and concluding at the tie-in with the UCC North Rail Yard (Station 414 + 86). The design details and associated station locations are shown on Figure 2-3.

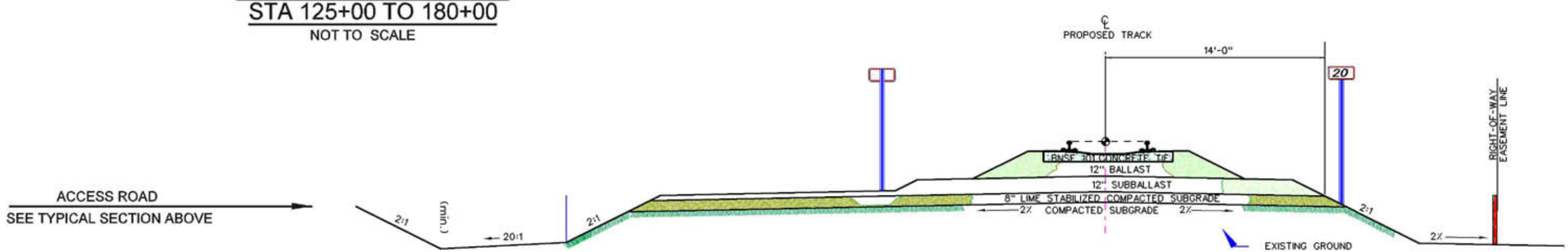
Potential effects to local residents as well as natural and cultural resources were major considerations in SEA's determination of an environmentally preferable alternative. By following existing property lines for almost its entire length, the Property Alignment Alternative would minimize disruption to local farming operations and would avoid displacing local homeowners. This alternative also would avoid the existing oil fields. This alternative would cross some isolated wetlands; however, it would affect far fewer acres of these palustrine systems than the other alignments. The alignment also would avoid the only recorded historical site in the area.

2.3 SELECTION OF PROPOSED RAIL LINE LOCATION

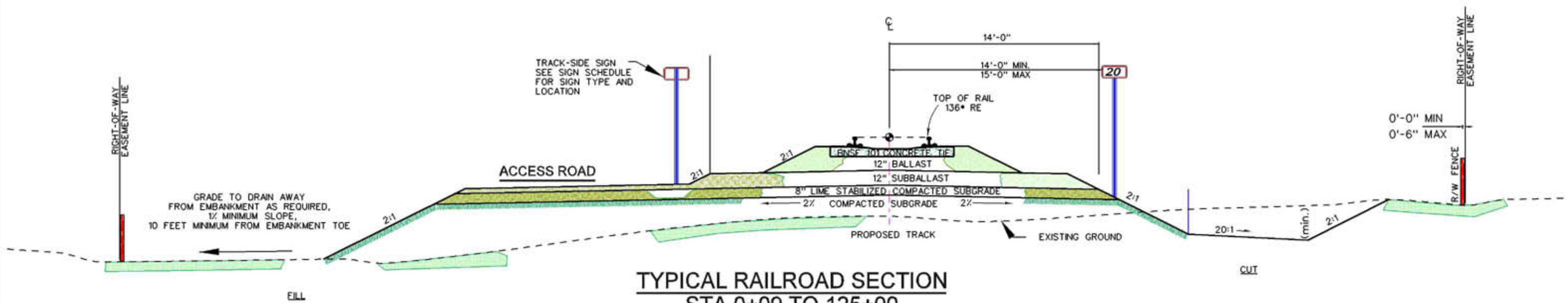
The Property Alignment Alternative provides the most environmentally preferable location for a new rail line connection from Kamey to the UCC facility in Seadrift.



ACCESS ROAD SECTION
STA 125+00 TO 180+00
NOT TO SCALE



TYPICAL RAILROAD SECTION
STA 125+00 TO 180+00
NOT TO SCALE



TYPICAL RAILROAD SECTION
STA 0+09 TO 125+00
STA 180+00 TO 414+00
NOT TO SCALE

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RAILROAD TYPICAL SECTIONS
Figure 2-2

Table 2-1
EXISTING FEATURES ALONG THE PROPERTY ALIGNMENT ALTERNATIVE

Station*	Existing	Proposed Structure
0+00	Start Project	Turnout from Port Lavaca Branch
5+50	TxDot drainage easement	Bridge No. 0.10 - Length: 80 feet
9+50	US Highway 87	
13+50	Future US 87- Northbound Lane	Grade separation
15+00	Future US 87- Southbound Lane	Grade separation
16+50	Tributary to Chocolate Bayou	Bridge No. 0.31 - Length: 80 feet
20+70 – 40+50	Crops	ROW fencing
41+90	Private roadway	At-grade crossing
52+00	Chocolate Bayou	Bridge No. 0.95 – Length: 309 feet
54+50 - 118+50	Crops	ROW fencing
60+00	Private roadway	At-grade crossing
122+00	Electric transmission lines	
123+50	Drainage channel 1	Bridge No. 2.33 – Length: 40 feet
130+00 - 144+50	Pasture	ROW fencing
146+00	Agua Dulce Creek	Bridge No. 2.76 – Length: 40 feet
145+50 - 171+00	Pasture	ROW fencing
171+80	Private roadway	At-grade crossing
172+00 - 203+00	Crops	ROW fencing
203+00 - 230+50	Pasture	ROW fencing
224+00	Drainage channel 2	Bridge No. 4.24 – Length: 40 feet
230+50 - 249+00	Crops	ROW fencing
252+50	Drainage channel	Bridge No. 4.78 – Length: 20 feet
265+50	Sweetwater Road	At-grade crossing
265+50 - 305+00	Pasture	ROW fencing
275+00	Drainage channel 3	Bridge No. 5.21 – Length: 20 feet
278+50	Drainage channel 4	Culvert
304+00	Pipeline	
307+00	Boyd Road	At-grade crossing
307+50	Electric transmission lines	
307+00 - 336+00	Wooded tract	ROW fencing
338+50	State Highway 35	
339+00	Transmission line	
341+00	Future State Highway 35	Grade separation
339+00 - 369+00	Crops	ROW fencing
371+00	Sikes Road	At-grade crossing
371+00	Transmission lines	
371+50 - 399+00	Crops	ROW fencing
384+50	Drainage Channel	Bridge No.7.28 - Length: 20 feet
399+00	East Coloma Channel	Bridge No.7.55 - Length: 84 feet
399+50 - 414+86	Pasture	ROW fencing
414+86	Union Carbide property line	End Project

* See Figure 2-3

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PROPERTY ALIGNMENT ALTERNATIVE
Figure 2-3